The Effect of Overlap in the Measurements of Track Density in a Bubble Chamber.

straight line with a mean density g. The distribution of the distances x between the centres of the bubbles is Poissonian and is therefore of the form:

$$w(x)dx = g.\exp(-gx)dx .$$

When overlapping occurs, a track consists of clusters and gaps shown schematically in Fig.1. The integral distribution of gap length can be derived from the above Poissonian distribution and has the form $P(l) = \exp(-gl)$. This distribution was confirmed experimentally excluding very short gaps (when l is less than D/2) which have to be rejected (Ref.1). The latter is equivalent to an effective increase of bubble size. The following methods are considered: 1) Gap distribution. The main disadvantage of this method is that statistical errors are large near the region $gD' = 1$ where D' is the effective bubble size. 2) Mean gap size. 3) Transparency of the track. This is defined as the mean ratio of the total length of all the gaps greater than l_0 and the length of the track. It is shown that

Card2/3 when gD' is less than 2 then the method of the "transparency

The Effect of Overlap in the Measurements of Track Density in a Bubble Chamber.

of the track" is most convenient, and for gD' greater than 2, the method of "number of gaps" is suitable. Fig.2 shows curves of :

$$(\delta g/g)\sqrt{\frac{L}{D'}}$$

as a function γ where $\sigma g/g$ is the statistical error in g, L is the total length of the track, $\gamma = gD' = g(D + l_o)$.

In this figure, Curve 1 refers to the gap density, Curve 2 - mean length of gap, Curve 3 - transparency of the track, Curve 4 - transparency of the track with rounding off, and Curve 5 - accuracy in the absence of overlap.
There are 2 figures and 9 references, 3 of which are Slavic.

SUBMITTED: March 11, 1957.

AVAILABLE: Library of Congress

Card 3/3

AUTHOR BLINOV, G.A., YU.S.KRESTNIKOV, LOMANOV, M.F., SHALAMOV, Ya.Ya. 56-6-40/56

TITLE On the Use of a Mixture of Two Liquids for a Bubble Chamber. (Primeneniye smesi dvukh zhidkostey dlya puzyr'kovoy kamery-Russian).

PERIODICAL Zhurnal Eksperim.i Teoret.Fiziki, 1957, Vol 32, Nr 6, pp 1572-1573 U.S.S.R.

ABSTRACT If the dimensions of bubble chambers are enlarged, the technical difficulties connected with their operation are increased, for it is necessary to provide for such temperatures and pressures in the chamber as correspond to the liquid used. These difficulties might be removed to a considerable extent if it were possible to work at a temperature that is near room temperature. Perhaps a good working temperature might be attained by the suitable mixture of two liquids (as e.g. propane andphreon). For this purpose the authors carried out experiments with a bubble chamber which was filled with a mixture of phreon-12 (CCl_2F_2) and phreon-13 ($CClF_3$). The construction of the chamber used for this purpose has already been described in a previous paper. By fitting a Co^{60}-γ- source beside the chamber, it was possible to watch the traces of the electrons and to photograph them. In this way it was possible to find out at what temperatures, pressures, and concentrations, the traces can be observed. The authors selected mixtures of two different compositions. The data of the two mixtures are given. The experiments were carried out in the case of the first mixture at temperatures of from 19 to 38°C and in

Card 1/2

On the Use of a Mixture of Two Liquids for a Bubble Chamber.

56-6-40/56

the case of the second at temperatures of from 43 to 52°C. The results of these experiments are given in form of a diagram. The chamber was expanded every 1o minutes.In the case of all experiments carried out pressure in the chamber between expansions amounted to 35 atm. The duration of sensitivity was determined photographically.The chamber works satisfactorily with a mixture which,at room temperature,has a pressure of the saturating (saturated) vapors of about 21 atm. The mixture used here is suited for many nuclear investigations because of its high density ($\sim$1.o g/cm^3). Using such a mixture of liquids might render selection of the filling medium forthe chamber more easy.Also mixtures containing hydrogen as e.f. methane and propane,are interesting.
(1 illustration).

ASSOCIATION Not Given.
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SUBMITTED 8.2.1957
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Card 2/2

SOV-120-58-1-5/43

AUTHORS: Blinov, G.A., Lomanov, M.F., Meshkovskiy, A.G., Shalamov, Ya.Ya. and Shebanov, V.A.

TITLE: A Large Freon Bubble Chamber (Bol'shaya puzyr'kovaya freonovaya kamera)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 1, 2 plates and pp 35-38 (USSR)

ABSTRACT: The working volume of the chamber described in the present paper is 17 litres and it works at room temperature at a pressure of 38 atm. A mixture of freon-12-freon-13, having a density of about 1.2 is used. The maximum path of particles in this chamber is 0.7 of the mean path between nuclear interactions. A diagram of the chamber is shown in Fig.1. The main body of the chamber is made of steel and the windows are covered by plexiglass plates, 9 cm thick and attached to the body of the chamber by steel flanges. A description is given of a device giving good pressure control. The chamber was used in the beam of the synchrocyclotron of the United Institute for Nuclear Studies. The beam employed was either the proton or the neutron beam, the maximum energy being 680 MeV. Fig.3 (facing p.34) shows a photograph of particles scattered from a paraffin target irradiated with 670 MeV protons. The following persons are thanked for their inter-

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SOV-120-58-1-5/43

A Large Freon Bubble Chamber.

est and collaboration: A. I. Alikhanov, V. A. Beketov, Yu. I. Makarov, M. G. Polikarpov, V. A. Shchegolev, V. P. Rumyantseva and Ye. V. Kuznetsov. There are 3 figures, 1 table and 8 references, of which 5 are English and 3 Soviet.

SUBMITTED: July 4, 1957.

1. Bubble chambers--Design 2. Bubble chambers--Materials
3. Methyl halides--Applications 4. Particles--Detection

Card 2/2

SOV-120-58-3-27/33

AUTHORS: Lomanov, M. F., Shchegolev, V. A.

TITLE: Application of Hydrogenous Liquids in a Bubble Chamber Working at Room Temperature (Primeneniye vodorodsoderzhashchey zhidkosti v puzyr'kovoy kamere dlya raboty pri komnatnoy temperature)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 3, p 103 (USSR)

ABSTRACT: Blinov (Ref.3) has shown that propane (C_3H_8) may be used as the working liquid in a bubble chamber. However, the working temperature is then about 64°. In order to obtain a working liquid which could be used at room temperature the present authors have tried a mixture of propane and ethane. The chamber which was used in this work was that described in Ref.4. The critical temperatures of these two liquids are 96.3 and 32.1°C, respectively, and are close to the critical temperatures of freon-13 and freon-12. Therefore, similarly to the freon mixture, a mixture of two-thirds of technical propane and

Application of Hydrogenous Liquids in a Bubble Chamber Working at Room Temperature

one-third ethane (by volume) was employed. At a temperature of 25°C the pressure of saturated vapour of such a mixture was 23 atm. Experiments have shown that the use of the above liquid mixture does not involve any additional technical difficulties. There are no figures but 5 references, of which 4 are Soviet and 1 English.

SUBMITTED: September 20, 1957.

1. Propanes--Temperature factors 2. Ethanes--Temperature factors 3. Solutions--Properties 4. Vapor pressure--Temperature factors

Card 2/2

24(5)

AUTHORS: Blinov, G. A., Lomanov, M. F., Shalamov, Ya. Ya., Shebanov, V. A., Shchegolev, V. A.

SOV/56-35-4-7/52

TITLE: Investigation of the Interaction of π^+-Mesons With Light Nuclei in the Energy Range 80-300 MeV (Issledovaniye vzaimodeystviy π^+-mezonov s legkimi yadrami v oblasti energiy 80-300 MeV)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 4, pp 880-886 (USSR)

ABSTRACT: The investigations were carried out in a Freon bubble chamber (17 liters, 50.22.15 cm^3) for ten energy values in the range of 80-300 MeV; measurements were carried out, for the interaction between positive pions and C-, F-, and Cl-nuclei, of the charge-exchange scattering cross sections, of star production cross sections, and of total elastic and inelastic scattering cross sections. In the interval of 210-300 MeV the production of charged pions by π^+-mesons was observed in 6 cases. In transition from 80 to 200 MeV the exchange scattering cross section is doubled and attains 10% of the geometric nuclear cross section. The star production cross section has its maximum at about 180 MeV. Also 260 MeV proton interaction was investigated.

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Investigation of the Interaction of π^+-Mesons With Light Nuclei in the Energy Range 80-300 MeV

SOV/56-35-4-7/52

A comparison of stars occurring in exchange scattering with stars occurring in the interaction between protons and C-, F-, and Cl-nuclei shows that exchange scattering in light nuclei occurs as a result of a single interaction of the inciding π^+-meson with the individual nucleon of the nucleus. Comparison of stars occurring in absorption with those produced by protons shows that within the energy interval investigated π^+-absorption is in general the result of a single interaction of the π^+-meson with a proton-neutron pair. In the case of 200 MeV π^+-mesons this process occurs in 60-70% of cases. The experimental order and the carrying out of the experiments is described in detail. Results are shown by diagrams and tables. Figures 2-4 show photographs of charge-exchange scattering processes. Figure 4 shows a typical case of a $\pi^0 + e^+ + e^- + \gamma$ reaction. For π^+-mesons the exchange scattering reactions with free nucleons develop according to the scheme $\pi^+ n \rightarrow \pi^0 p$, and the absorption ($E_{pion} < 100$ MeV) according to $\pi^+ + (pn) \rightarrow (pp)$. For the 6 cases of the generation of charged pions on F-nuclei a cross section

Card 2/3

of $(0.7 \pm 0.3) \cdot 10^{-27} cm^2$ was measured. The authors thank A. A. Tyapkin for discussing the results, V. P. Dzhelepov for making it possible to carry out the experiments, and V. P. Rumyantseva and K. A. Zaytsev for their assistance in evaluating measuring results. There are 7 figures, 3 tables, and 10 references, 5 of which are Soviet.

SUBMITTED: May 6, 1958

24(5)

AUTHORS: Lomanov, M. F., Meshkovskiy, A. G., Shalamov, Ya. Ya., Shebanov, V. A., Grashin, A. F.

SOV/56-35-4-8/52

TITLE: Bremsstrahlung of π-Mesons in Interaction With Nuclei (Tormoznoye izlucheniye π-mezonov pri vzaimodeystvii s yadrami)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 4, pp 887-893 (USSR)

ABSTRACT: Already in earlier papers the pion bremsstrahlung in the nuclear field of forces has been investigated theoretically by several authors (Refs 1-4, Landau, Pomeranchuk, Vdovin, Solov'yev). Solov'yev investigated pion bremsstrahlung at energies near the rest-energy of pions, and determined the bremsstrahlung cross section on the nucleon as being of the order of $10^{-28}cm^2$. For the pion bremsstrahlung on nuclear forces larger cross sections are obtained. In the present paper the authors report the discovery of a pion bremsstrahlung during the investigation of the interaction between positive pions and light nuclei in the energy range near rest energy. Experiments were carried out with the external π^+-meson beam of the synchrocyclotron

of the Laboratoriya yadernykh problem Ob"yedinennogo instituta yadernykh issledovaniy (Laboratory for Nuclear Problems of the United Institute for Nuclear Research). The authors used a bubble chamber with a Freon mixture ($CClF_2$+$CClF_3$). The γ-quanta of the bremsstrahlung were observed by means of the conversion effect on electron-positron pairs. (In this connection compare also the papers worked out by the authors in cooperation with Blinov and Shchegolev)(Refs 5, 6). Energy- and cross section measurements are here carried out for pion nuclear force bremsstrahlung in the energy range of $80 < E_{\pi^+} < 300$ MeV on C-, F-, Cl-nuclei, and results are compared with theoretical results. For the inelastic pion scattering on nuclei (processes

$$\pi^+ + A \rightarrow \pi^+ + \gamma + A' \text{ and } \pi^+ + A \rightarrow \pi^+ + \pi^0 + A'$$

where A and A' denote the initial- and final states of the nucleus respectively) and the same elastic processes, 20 cases of such a pion bremsstrahlung were found on 7000 plates (elastic + inelastic), and a cross section (on F-nuclei) of $(4.5 \begin{smallmatrix} + 1.2 \\ - 0.2 \end{smallmatrix}) \cdot 10^{-27} cm^2$ was determined. Among these 7000 pictures

Bremsstrahlung of π-Mesons in Interaction With Nuclei SOV/56-35-4-8/52

3 cases of bremsstrahlung caused by π^+-absorption on the nucleus were ascribed to $\pi^+ + A \rightarrow \gamma + A'$, $\pi^+ + A \rightarrow \pi_0 + A'$) and in 2 cases the bremsstrahlung is ascribed to charge-exchange scattering of π^+-mesons on the nucleus ($\pi^+ + A \rightarrow \pi^0 + \pi^0 + A'$). Calculation of the cross sections was carried out in quasi-classical approximation, and good agreement with theoretical results was obtained. The authors thank I. Ya. Pomeranchuk for the interest he displayed in this work. There are 3 figures, 1 table, and 8 references, 6 of which are Soviet.

SUBMITTED: May 6, 1958

Card 3/3

AEP Nr. 9004 12 June LOMANOV, M.F.

200-LITER BUBBLE CHAMBER (USSR)

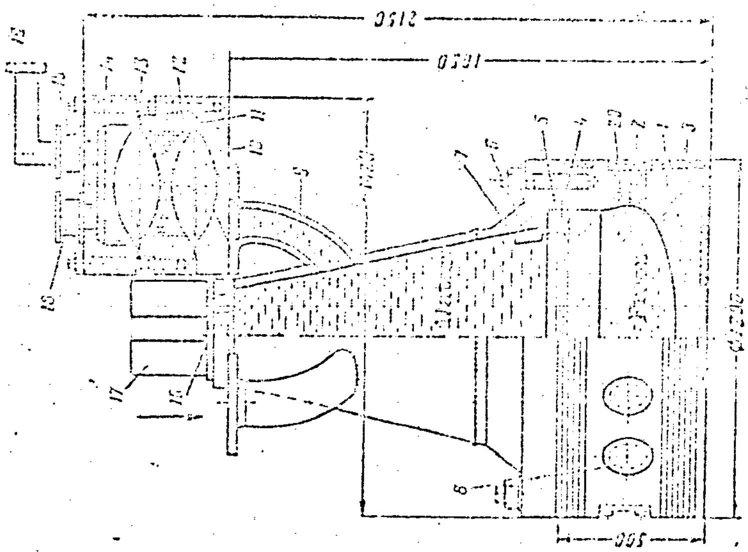
Lomanov, M. F., A. G. Meshkovskiy, M. S. Khropov, and V. A. Shchegolev. Pribory i tekhnika eksperimenta, no. 2, Mar-Apr 1963, 37-40.
S/120/63/000/002/007/041

The Institute of Theoretical and Experimental Physics has developed a freon bubble chamber which can be used for the observation of particle stopping within 80 cm. The chamber operates at 30 atm and 25.6°C and uses a mixture consisting of freon-12 (CCl_2F_2) and freon-13 ($CClF_3$) in a two-to-three ratio by weight. The duralumin chamber [see illustration], which has a 900-mm inside diameter, is provided with an organic glass (OT-1) window (5) sealed with flexible rubber (4), permitting the window to move vertically 30 mm. The conical outer container (7) is filled with water and connected by pipe (9) to the expansion mechanism. The chamber is illuminated by nine [illegible] -12 flash-tubes (20). Two cameras (17) with focal lengths of 50 mm are placed at the top of the container. Coil pipe (3) is connected to the [illegible] -24 thermostat and maintains a chamber temperature constant within ± 0.1°C. The chamber sensitivity time is greater than 40 msec, the full cycle of operation is 13 sec, and expansion and compression times are 15 to 20 msec. In tests the chamber withstood some 10^4 test expansions, and 2500 test photos were obtained. [NP]

Card 1/2

AID Nr. 985-5 12 June

200-LITER BUBBLE CHAMBER [Cont'd] S/120/63/000/002/007/041



Card 2/2

35067

S/195/62/003/001/002/010
E071/E136

11.1510
11.1210

AUTHORS: Lomanov, Yu.P., Ponomarev, A.N., and Tal'roze, V.L.

TITLE: A calorimetric study of the reactions of atomic hydrogen with solid olefines at 77 °K

PERIODICAL: Kinetika i kataliz, v.3, no.1, 1962, 49-57

TEXT: The importance of studying the reactions of atomic hydrogen with olefines for the understanding of the mechanism of radiolysis of organic substances is stressed. In this way the reactions of atomic hydrogen, formed in the primary elementary act of radiolysis on interaction of a fast electron with a molecule, can be elucidated. The object of the present work was the development and application of the method of kinetic calorimetry for the investigation of the interaction of atomic hydrogen with solid hydrocarbons at low temperatures. In the course of the work the method was developed permitting simultaneous measurement of the velocity of absorption of atomic hydrogen and the velocity of heat evolution in the reaction layer (up to 10^{-4} cal/sec) on interaction of hydrogen atoms

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(formed in the gaseous phase) with hydrocarbons at 77 °K. The method was based on the observation of the amount of evaporated nitrogen as a measure of heat evolution and of hydrogen pressure as a measure of hydrogen absorption. The apparatus is described in some detail. It was calibrated by passing an electric current and measuring the amount of evaporated nitrogen. The results obtained indicated that the apparatus is capable of measuring rates of heat evolution of about $3-5 \times 10^{-4}$ cal/sec and a total heat evolved of the order of 10^{-2} cal. Experiments with solid propylene indicated that the ratio of heat evolved to the amount of absorbed hydrogen during reaction of atomic hydrogen with propylene amounted to 110-115 kcal/mole and remains constant when the thickness of the hydrocarbon layer is 2×10^{-4} cm. This indicated that the heat evolution is almost completely due to the hydrogenation of the olefine and the apparatus measures most of the heat evolved in the reaction layer, i.e. heat losses did not exceed 15%. Thus, under experimental conditions recombination of hydrogen atoms inside the hydrocarbon does not practically take place. For comparison /

A calorimetric study of the ... S/195/62/003/001/002/010
E071/E136

the evolution of heat in a layer of pure solid propane under the same experimental conditions was measured. The velocity of heat evolution was 0.06 of that taking place in propylene. This can be ascribed only to the recombination of hydrogen. For similar experiments with isobutylene the value of heat evolved was 118 kcal/mole, close to the heat of hydrogenation with atomic hydrogen (131.4 kcal/mole). With increasing thickness of the isobutane layer covering isobutylene the ratio of heat evolved to hydrogen absorbed (Q/N) increases, indicating that the recombination of hydrogen ($H^{\cdot} + H^{\cdot} \longrightarrow H_2$) in the hydrocarbon layer becomes noticeable. The evolution of heat due to the above process for an isobutane layer of about 10^{-4} cm becomes comparable to the heat of the hydrogenation of isobutylene (whilst the velocity of absorption of hydrogen is 5-7 times lower than that on the surface of pure butylene). On the basis of the results obtained and the literature data on deuterium-hydrogen exchange an evaluation of the relative role of some reactions is carried out.

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A calorimetric study of the ... S/195/62/003/001/002/010
E071/E136

There are 4 figures and 3 tables.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR
(Institute of Chemical Physics, AS USSR)

SUBMITTED: July 11, 1961

Card 4/4

MOSKALENKO, S.I.; GABOVICH, M.S.; BACHINSKIY, Yu.V.; TOMILIN, A.V.; MEDVEDEV, P.M.; LOMANOVA, M.M.; GOLOVKOV, P.D.; GAYDUKOV, G.I.; ALEYNIKOV, V.V.; STENIN, N.D.; MIRONOVA, V.V.; BELAVINTSEVA, Ye.S.; TSVETSINSKIY, S.V.; MECHKURNYY, P.; KOBZAR', N.K.; ROZHNOVA, Ye.S.; PELETMINSKIY, V.N.; GORDEYCHUK, V.K.; SHMYRIGO, V.F.; KISLYUK, N.

Fifty years in the sugar industry. Sakh.prom. 33 no.2:18 F '59. (MIRA 12:3)

(Shtepan, Georgii Viacheslavovich, 1888-)

LOMANOVA, M.M.

Clarifying capacity of activated carbon of Soviet manufacture.
Sakh.prom.35 no.3:16-18 Mr '61. (MIRA 14:3)

1. Gruppovaya laboratoriya pri sakharnom zavode imeni K.Libknekhta.
(Carbon, Activated) (Sugar manufacture)

KACHURIN, L.G.; ZAYTSEVA, N.A.; LOMANOVA, S.I.

Temperature limits of formation of ice particles in supersaturated water vapor. Izv.AN SSSR Ser.geofiz.no.7:857-861 JL '56 (MLRA 9:9)

1.Leningradskiy gidrometeorologicheskiy institut.
(Ice) (Condensation)

LOMANOVICH, V. (UA3DH)

Shortwavy transmitter using a rod-type tube. Radio no.10:25-26 O '62. (MIRA 15:10)

(Radio, Shortwave—Transmitters and transmission)

TARNIZHEVSKIY, M., kand. tekhn. nauk; LOMANOVICH, V.

Protection from stray currents. Radio no.6:22-25 Je '63.
(MIRA 16:7)

(Electric railroads—Current supply)
(Electric lines—Corrosion)

LOMANOVICH, V. (UA3DH); PENKIN, D. (UA3HP)

Antennas for 430-440 mc. operation. Radio no.11:23-24 N '63.
(MIRA 16:12)

LOMANOVICH, V. (UA3DH); PENKIN, D. (UA3HP)

Transmitter-receiver for operation on 430-440 mc. Radio no.10:21-24 O '63. (MIRA 16:11)

LOMANOVICH, V., inzh.

Transistorized d.c. amplifier. Radio no.6:46-47 Je '65.
(MIRA 18:10)

LOMANOVICH, V. (Moskva)

"Thyratron" type semiconductor devices. Radio no.10:55-58 O '64.
(MIRA 18:2)

1. LOMNOVICH, V.
2. USSR (600)
4. Radio - Transmitters and Transmission
7. Battery transmitter. Radio No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

LOMANOVICH, V.

Radio, Short-Wave

Receiving set for the beginner short-wave operator. Radio No. 4, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

LOMANOVICH,V.

Sound recording equipment. Radio no.9:35-37 S'55. (MLRA 8:11)
(Sound--Recording and reproducing)

LOMANOVICH, V.

SOV/112-58-1-1338

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 1, p 200 (USSR)

AUTHOR: Lomanovich, V.

TITLE: 144-146 Mc Amateur Radio Station With AC-DC Supply (Lyubitel'skaya radiostantsiya na 144-146 Mgts s universal'nym pitaniyem)

PERIODICAL: V sb.: V pomoshch' radiolyubitelyu, M., Izd-vo DOSAAF, 1956, Nr 1, pp 40-59

ABSTRACT: An amateur radio station is described, intended for voice communication in the 144-146 mc band (2.05-2.09 m). The radio station consists of two separate units: a transmitter-receiver, and a supply pack. The regenerative receiver is designed with two tubes: a 6Zh1P pentode acting as a RF amplifier and also as an AF preamplifier, and a 6N3P double triode acting as a superregenerative detector and the final AF stage. Receiver sensitivity is 5 μv or better. The transmitter comprises: a quartz-stabilized master oscillator designed with one-half of the 6N3P tube with emphasized third harmonic in the anode circuit; a tripler stage; two doubler stages designed with 6N3P

Card 1/2

144-146 Mc Amateur Radio Station With AC-DC Supply

double triode; a push-pull power amplifier designed with 6N3P double triodes; one 6P1P-tube modulator. Anode modulation is used in the transmitter. A carbon microphone is connected to the cathode circuit of the modulator tube. The supply pack comprises a bridge-circuit full-wave selenium rectifier and a nonsynchronous vibrapack for input voltage of 6 v. RF filters are connected across the input circuits and contact circuits of the vibrapack to prevent interference. The rectifier is designed for 100-240 v AC supply. Power consumption for transmission is 30-35 w, for reception 20 w. Receiver and transmitter can be connected separately to their supply sources to save on electric energy. The radio station construction is described in detail. Coil winding data, mounting procedure, and station alignment are presented.

Ye.R.S.

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1. Radio stations--Power 2. Radio stations--Equipment 3. Alternating current 4. Electric current

Card 2/2

LOMANOVICH, V. (UA3DH)

Radio station 144-146 Mc/s. Radio no.6:14-17 Je '56. (MLRA 9:8)
(Radio stations)

AID P - 4938

Subject : USSR/Electronics

Card 1/1 Pub. 89 - 5/18

Author : Lomanovich, V.

Title : A radio station for 420 to 425 Mc

Periodical : Radio, 8, 22-26, Ag 1956

Abstract : The radio station was developed by the laboratory of the Central Radioclub of the DOSAAF. It operates in decimeter waves (71.43 to 70.59 cm). The author gives a detailed description of the station and of its construction and testing. Nine drawings, and connection diagrams, 1 table of vacuum tube specifications.

Institution : None

Submitted : No date

LOMANOVICH, V.

Shortwave transmitter of the third category. Radio no.10: 22-25 '56. (MLRA 9:11)

(Radio, Shortwave--Transmitters and transmission)

Lomanovich, V

107-12-39/46

AUTHOR: Lomanovich, V.

TITLE: Heterodyne Resonance Indicator
(Geterodinnyy indikator rezonansa)

PERIODICAL: Radio, 1956,Nr12, pp. 53-55 (USSR)

ABSTRACT: A tube-type multi-purpose heterodyne resonance indicator, described in the article, has widest applications in radio amateur work. The working band 1.1 to 150 mc is subdivided into 8 sub-bands which correspond to amateur SHFs. Type 6C1П tubes are used for oscillator and modulator, and type СГ-1П (gas discharge tube) for voltage stabilization. Modulation by 400 or 100 c. The instrument consists of two assemblies: h-f oscillator with plug-in coils and the power-supply pack.

Details of coils, resistors and capacitors for amateur construction work are given, also instructions for adjustment and operation.

Methods of measurements are given by D. Tutorskiy and G. Davydov in their article in Radio, 1956,Nr 5. There are 6 figs and 1 table in the article.

ASSOCIATION: The Laboratory of the Central Radio Club (Laboratoriya Tsentral'nogo radiokluba DOSAAF).

AVAILABLE: Library of Congress.

Card 1/1

LOMANOVICH, V.

Universal heterodyne resonance indicator. V. pom. radioliub. no.4: 35-50 '57. (MIRA 11:2)

(Resonance--Measurements)

LOMANOVICH, V.

107-57-5-40/63

AUTHOR: Lomanovich, V. (UA3DH)

TITLE: A Metal-Ceramic Tube Oscillator (Generator na metallokeramicheskoy lampe)

PERIODICAL: Radio, 1957, Nr 5, pp 36-38 (USSR)

ABSTRACT: The 7-meter amateur band is very popular now. Soviet radio hams seldom work on higher frequencies partly because of certain difficulties with tube operation. For frequencies around 1,000 mc, however, very satisfacory results can be obtained with Soviet-make metal-ceramic tubes described in "Radio", 1955, Nr 11. The article describes a do-it-yourself type 420-425 mc oscillator using a metal-ceramic tube. The oscillator has been developed at the DOSAAF Central Radio Club.

A self-excited simple-circuit oscillator designed with GI-12B metal-ceramic tube develops 1.8 w at 420-425 mc. Forced air cooling of the tube is recommended. Due to higher working temperatures pure tin is recommended for soldering. A circuit diagram, detailed specifications of all parts, construction of the coupling loop and mica capacitors, and drilling plans are supplied. Instructions for aligning, adjustments, measurements, etc. including the switching-on procedure of the oscillator are given. At a reduced anode voltage the oscillator can be operated without forced cooling.

Three metal-ceramic tubes were tested as oscillators at 400 v anode voltage: GI-7B developed 2.5 w, GI-11B - 2 w, and GI-12B - 1.8 w.

There are 2 figures and 2 Soviet references.

AVAILABLE: Library of Congress

Card 1/1

Lomanovich, V.

107-57-6-33/57

AUTHOR: Lomanovich, V.

TITLE: A Superhetrodyne Super-regenerative Receiver 144-146 MC (Supersverkhregenerator)

PERIODICAL: Radio, 1957, Nr 6, pp 33-35 (USSR)

ABSTRACT: Essentially, this is a superhetrodyne receiver whose second detector works as a super-regenerator. The advantages of a superhetrodyne receiver -- high selectivity and stability of operation -- are combined here with the high sensitivity and automatic volume control of the super-regenerator. At the same time, the receiver is free from reradiation, the disadvantage inherent to super-regenerative types. The super-regenerative detector operates on one frequency only. An intermediate frequency of 30.1 MC was selected because the noise level from various radio stations around Moscow was found to be lowest at this frequency. An S-meter which uses type P1E transistor permits more accurate determination of direction to the transmitting station. Detailed instructions for building the receiver are given, including panel drilling plans, wiring, winding various coils and transformers, aligning and adjustment. Five type 6Z1P tubes and one type P1E transistor are used in the receiver. A rather complicated steerable antenna is used, its bearing being indicated by a

Card 1/2

107-57-6-33/57

A Superhetrodyne Super-regenerative Receiver 144-146 MC

magnetic compass linked with its base.

There are six figures in the article and two in the centerfold.

AVAILABLE: Library of Congress

Card 2/2

Lomanovich, V.

107-57-7-33/56

AUTHOR: Lomanovich, V. (UA3DH, presumably Moscow)

TITLE: Short-Wave Transmitter of the Second Category
(KV peredatchik vtoroy kategorii)

PERIODICAL: Radio, 1957, Nr 7, pp 26-30 (USSR)

ABSTRACT: The transmitter is intended for c-w work in these ham bands: 160, 80, 40, and 20 meters. A-c power supply 110, 127, 220 v, 100 w. As a master oscillator it uses the transmitter described in Radio, 1956, #10.

The transmitter includes two frequency doublers which are used to produce two upper rated frequencies out of the highest frequency (80 m) of the master oscillator. Both frequency doublers are combined in one type 6N7G double triode. One type G-807 tube serves as the output power amplifier.

Detailed description of parts and instructions for assembling them are given. Also tube operation data, alignment, adjusting, and testing of the transmitter are discussed in detail. The keying relay is supposed to insure positive operation at the rate of 150 signs per mimute.

The transmitter was built and installed at the UA3DH amateur station. It was widely tested in actual operation and highly appreciated by the corresponding parties. There are 6 figs, 1 table, and 1 above mentioned Soviet reference.

ASSOCIATION: The Laboratory of the Central DOSAAF Radio Club

AVAILABLE: Library of Congress
Card 1/1

Lomanovich, V

AUTHOR: Lomanovich, V. 107-9-19/53

TITLE: A Small-Sized Radio-Transmitter (Malogabaritniy radioperedatchik)

PERIODICAL: Radio, 1957, # 9, p 29-31 (USSR)

ABSTRACT: This article describes in detail the design, the assembling and the tuning of a simple radio-telephone transmitter, built only with "П6Б" transistors, operating in the frequency range of 1,715 -1,800 kilocycles. Other frequency ranges, such as 3,500-3,600 or 7,000-7,100 kilocycles, may also be utilized by changing the values of the induction coil and of the capacitor. It was also tested in 80-meter and 40-meter radio-amateur bands.

Furthermore, junction transistors "П1Е"and "П2В"as well as point-contact transistors "С2Г"and "С1Е"were tested in this transmitter. The initial emitter-voltage is to be selected according to the transistor type utilized.

The circuit-diagram of this transmitter is given by figure 1, figure 2 representing its general view.

A ferrite antenna having a diameter of 8 mm and a length of 160 mm is utilized (the same as utilized for the "Dorozhniy" receiver). This antenna can be replaced by a small rod antenna

Card 1/2

having a length of 0.75 - 1.0 meter.

The transmitter, as well as the power sources, are contained in a case of 95 x 40 x 20 mm. Its total weight, inclusively batteries and antenna is 180 g and without antenna, it weighs 140 g. Power is supplied by 18 button-shaped hermetically sealed cadmium-nickel elements, having a capacity of 50 mah each.

Dry-batteries can also be utilized with this transmitter, for instance the "ГБЧ-СА-30"type. However, it would be much more advantageous to utilize one element of the "49-САМЦГ-0,25-П" hearing-aid battery.

The capacities of the aforementioned batteries will permit an uninterrupted operation of the transmitter for 8-9 hours.

The article contains 8 figures.

AVAILABLE: Library of Congress

Card 2/2

LOMANOVICH, Viktor Aleksandrovich; PROZOROVSKIY, Yu.N., red.; LARIONOV, G.Ye., tekhn.red.

[Amateur radio stations on frequency range of 144-146 and 420-425mc.] Liubitel'skie radiostantsii na diapazony 144-146 i 420-425 Mgts. Moskva, Gos. energ. izd-vo, 1958. 47 p. (Massovaia radiobiblioteka, no.288) (MIRA 11:4)
(Amateur radio stations)

AUTHOR: Lomanovich, V. SOV/107-58-2-4/32

TITLE: Partisan Radio (Partizanskoye radio)

PERIODICAL: Radio, 1958, Nr 2, p 9 - 10 (USSR)

ABSTRACT: The article deals with recollections of a war-time partisan radio operator who worked in the rear of the German Army. There is one photo.

1. Radio operators--USSR 2. Literature

Card 1/1

AUTHOR: Lomanovich, V. 107-58-3-19/41

TITLE: A Simple Ultra Short Wave Radio Station (Prostaya ukv radiostantsiya)

PERIODICAL: Radio, 1958, Nr 3, pp 26 - 29, p 1 of centerfold (USSR)

ABSTRACT: The author describes a simple stationary ultra short wave radio station which may be built by beginners. The transmitter and the receiver are built in one block for two-way telephone communication in the frequency range of 38 - 40 megacycles. Figure 1 shows the circuit diagram of the transmitter and receiver. The transmitter is built analogously to the ultrashort wave transmitter described in "Radio", 1955, Nr 1. A Colpitts oscillator and anode modulation are used. The transmitter has one "6Zh8" and one "6N5S" tube; the frequencies are tuned in by a variable capacitor. A carbon microphone is to be used. In case a dynamic microphone is used, it will be necessary to build an additional conventional LF amplifier stage, since some types of dynamic microphones have sound frequency voltage too low for the transmitter modulator. The oscillator and output modulator tubes are

Card 1/2

connected in series. The transmitter is built according to the straight amplification system with one "6N1P" and one "6N15" tube. An aperiodic HF stage and a variable tuning capacitor are used. Transmitter and receiver are not operated simultaneously but are switched on alternately. The power supply block contains one "5Ts4S" tube (fig.2). It will work on 110 - 220 volts ac. A current of 70 milliamps and 200 - 250 volts is required for the transmitter and receiver. There are two circuit diagrams, 5 diagrams, 1 sketch, and 1 table.

1. Radio station--Characteristics

SOV-107-58-4-37/57

AUTHOR: Dem'yanovskiy, B. (Deceased); Lomanovich,V. (VA3DH)

TITLE: Transistor Triode Transmitter (Peredatchik na poluprovodnikovykh triodakh)

PERIODICAL: Radio, 1958, Nr 4, pp 38-40 (USSR)

ABSTRACT: The instrument described is a short-wave transmitter built around transistor triodes with quartz stabilization and designed for work on the 40 and 20 m amateur bands. It consists of two transistors operating as master generator and power amplifier, and is designed for use with a single antenna, operating with the travelling wave system or as quarter-wave vibrators. The set is powered by dry batteries, weighs 700 g, and is suitable as a mobile radio station (with pole antenna). Construction and alignment details are given. There are 5 diagrams, 2 drawings, 1 table and 1 circuit diagram.

1. Radio transmitters--Design 2. Radio transmitters--Equipment
3. Triodes--Materials 4. Transistors--Applications

Card 1/1

SOV-107-58-9-20/36

AUTHOR: Lomanovich, V (UA3DH)

TITLE: A Receiver on the 144-146 Mc Band (Priyëmnik na 144-146 Mgts)

PERIODICAL: Radio, 1958, Nr 9, pp 29-31 (USSR)

ABSTRACT: The receiver uses super-miniature valves and is built in two units - receiver and main power unit. The power unit may be easily detached and the receiver powered by batteries for "Field Day" competitions. Straight amplification is employed with 1 RF stage, a superregenerative detector and two AF stages. In the interests of power economy, when the set is used with batteries, the last AF stage may be cut out. The RF stage is tuned to the middle frequency of 145 Mc and there is inductance coupling with the antenna. A triode fulfils the duty of superregenerative detector with capacitance feedback and self-quenching. The AF output stage has automatic bias and feeds either headphones or an external loudspeaker. The HT in the power pack is stabilized by an SG5B stabilitron and the pack

Card 1/2

supplies 160 v HT and 6.3 v LT. The coils used are home-made, prepared from bare silvered copper wire. Full constructional details and the method of aligning the set with a VHF signal generator are given. There are 3 circuit diagrams, 2 sets of diagrams and 3 figures.

1. Radio receivers--Performance 2. Electron tubes--Applications
3. Signal generators--Applications

SOV/[illegible]

AUTHOR: Lomanovich, V.

TITLE: ~~An Ultrashort-Wave~~ Wavemeter (UKV volnomer)

PERIODICAL: Radio, 1958, Nr 11, pp 18-20 (USSR)

ABSTRACT: The author describes an ultrashort-wave wavemeter for measuring radio waves of 5 to 23 cm (10,000 - 1,300 mc) in length. It has a two-stage low-frequency amplifier using two germanium triodes (Fig. 1), a coaxial measuring line (Fig. 2) (used instead of the usual two-wire line so as to reduce radiation losses), and a small disconical antenna (Fig. 3). At the 15th All-Union Exhibition the author was awarded first prize for his ultrashort-wave apparatus which included the above-mentioned wavemeter.
There are 3 sets of circuit diagrams, 1 diagram and 2 drawings.
(UA3DH)

Card 1/1

9(2) SOV/107-58-12-24/55

AUTHOR: Lomanovich, V.

TITLE: A 1500 mc Radio Set (Radiostantsiya na 1500 mgts)

PERIODICAL: Radio, 1958, Nr 12, pp 18-21 (USSR)

ABSTRACT: The author describes a portable VHF radio set working on a band from 1470 to 1520 mc, which he designed himself. He showed it at the 15th All-Union Exhibition of the Creative Work of Amateur Radio Designers and was awarded a first class diploma and first prize for it. The radio set is intended for use in field conditions and is fed by a 6 volt accumulator. A transistorized converter is used to obtain a relatively high anode voltage. The power supplied to the antenna by the transmitter is 0.1 volt. The radio set does not consume more than 9 volts when transmitting and 6 volts when receiving. It consists of two units.

Card 1/2

A 1500 mc Radio Set SOV/107-58-12-24/55

The h-f unit contains an autogenerator based on a master grid circuit, the antenna horn has a pyramid shape; the feed and control unit has a combined l-f modulated amplifier and dc converter. The radio set allows a correspondent to be called on voice frequency. The converter is based on a two-cycle blocking-oscillator circuit on type P4 triodes. The author/designer describes the set in full detail and gives instructions for tuning in. There are 5 circuit diagrams, 6 diagrams and 1 photograph.

Card 2/2

LOMANOVICH, Viktor Aleksandrovich; GODINER, F.Ye., red.; KAZANSKIY, N.V., red.; KOBYAR', V.N., tekhn.red.

[First shortwave radio transmitter-receiver set] Pervaia UKV radiostantsiia. Moskva, Izd-vo DOSAAF, 1959. 70 p. (MIRA 13:3)
(Radio, Shortwave)

SOV/107-59-2-25/55

6(4)

AUTHOR: Lomanovich, V. (UA3DH)

TITLE: A Simple Transmitter for Radio Control (Prostoy peredatchik dlya upravleniya po radio)

PERIODICAL: Radio, 1959, Nr 2, pp 31-32 (USSR)

ABSTRACT: This is a description of an ultra-short wave transmitter for radio control, operating on the 144-146 mc band. Power capacity - 50 milliwatt. The weight of the proper transmitter - 150 grams, and together with the feeding source - 500 grams. The current consumption in the anode circuit with a battery voltage of 50 volts is 1.5 milliampere, and using filament current, 100 milliampere, at 1.5 volts. In the transmitter a miniature ultra-short wave triode of the type 2S3A is used. It transmits 4 commands; one by

Card 1/2

SOV/107-59-2-25/55

A Simple Transmitter for Radio Control

switching on the transmitter, and three more by using buttons on the control panel. There are 4 diagrams.

Card 2/2

05401

8(SOV/107-59-8-21/49

AUTHOR: Lomanovich, V. (UA3DN)

TITLE: Converting Ultrashort Wave Radio Stations

PERIODICAL: Radio, 1959, Nr 8, pp 26-27 (USSR)

ABSTRACT: The author describes the conversion of a usw radio station described in "Radio" 1958, Nr 3. This station was originally designed for the 38-40 Mc range which may not be used any longer by radio amateurs. The author furnishes coil data for the 28-30 Mc range and describes the tuning procedures. There are 1 circuit diagram, 1 set of diagrams, 1 table and 1 Soviet reference.

Card 1/1

KOSTANDI, Georgiy Georgiyevich; YAKOVLEV, Valeriy Vladimirovich; LOMANOVICH, V.A., red.; BORUNOV, N.I., tekhn.red.

[UHF radio receivers for amateur radio communication] UKV priemniki dlia liubitel'skoi sviazi. Izd.2. Moskva, Gos.energ. izd-vo, 1960. 31 p. (Massovaia radiobiblioteka, no.367). (MIRA 13:12)

(Radio, Shortwave--Receivers and reception)

LOMANOVICH, Viktor Aleksandrovich; GODINER, F.Ye., red.; KAZANSKIY, N.V., red.; FAYNSHMIDT, F.Ya., tekhn.red.

[Simple amateur shortwave transmitter-receiver sets] Prostye UKV priemo-peredaiushchie liubitel'skie radiostantsii. Moskva, Izd-vo DOSAAF, 1960. 95 p. (MIRA 13:10)
(Radio, Shortwave)

BURLYAND, V.A.; YENYUTIN, Ye.A.; ZHEREBTSOV, I.P.; LEVITIN, Ye.A.; LOMANOVICH, V.A.; NEFEDOV, A.M.; SOBOLEVSKIY, A.G.; SONIN, Ye.K.; GRIGOR'YEVA, A.I., red.; KAFYAKINA, M.S., tekhn. red.

[A book for rural radio amateurs] Kniga sel'skogo radioliubitelia. Pod obshchei red. V.A.Berlianda. Moskva, Izd-vo DOSAAF, 1961. 511 p. (MIRA 15:3)

(Radio)

LOMANOVICH, V.; STRIZHEVSKIY, I.

Device for locating underground electric lines and pipelines. (MIRA 14:9)
Radio no.1:32-34 Ja '61.
(Electric lines--Underground)
(Electronic apparatus and appliances)

SHEYKO, Vladimir Pavlovich; GODINER, F.Ye., red.; LOMANOVICH, V.A., red.; KOROLEV, A.V., tekhn. red.

[Antennas for amateur radio transmitters]Antenny liubitel'skikh radiostantsii. Moskva, DOSAAF, 1962. 123 p. (MIRA 15:9)

(Amateur radio stations--Equipment and supplies)
(Radio--Antennas)

LOMANOVICH, V.A., inzh.; OGANEZOVA, I.S., inzh.

Automatic device for protecting underground structures from corrosion brought about by stray currents. Vest. sviazi 23 no.5-10-11 My '63. (MIRA 17:4)

LOMANOVICH, V.A.; RUMYANTSEV, M.M.; KAZANSKIY, N.V., red.; GODINER, F.Ye., red.; BLAZHENKOVA, G.I., tekhn. red.

[Manual for training specialists in the repair of radio receivers] Posobie dlia podgotovki masterov po remontu radiopriemnikov. Moskva, Izd-vo DOSAAF, 1964. 364 p. (MIRA 17:3)

LOMANOVICH, V.A.

Four-layer semiconductor devices. Vest.svlazi 25 no.2:10-13 F '65. (MIRA 18:6)

LEVIN, V.M., kand. tekhn. nauk; LOMANOVICH, V.A., nauchnyy sotrudnik

Automatic stepped-up drainage. Vest. sviazi 25 no.6:21-23 Je '65. (MIRA 18:11)

LOMANOVICH, Viktor Aleksandrovich; IVANOV, S.M., red.

[Chemical electronics] Khimotronika. Moskva, Znanie, 1965. 31 p. (Novoe v zhizni, nauke, tekhnike. IV Seriia: Tekhnika, no.22) (MIRA 18:10)

STANIEWSKI, Ryszard; KOWALSKI, Mieczyslaw; LOMANSKA, Irena

Neutralization of Rhizobium phages by antiphage sera; preliminary note. Acta microbiol. polon. 12 no.3:187-191 '63.

1. From the Department of General Microbiology, Maria Curie-Sklodowska University, Lublin. 2. Adres autorow: Zaklad Mikrobiologii Ogolnej [illegible], Lublin, Al. Raclawickie 20, Polska.

(RHIZOBIUM) (NEUTRALIZATION TESTS)
(IMMUNE SERUMS) (BACTERIOPHAGE)
(BACTERIOPHAGE TYPING)

LOMANYY, V.D.; PROKOF'YEV, A.G.; YANOVSKIY, B.M.

Using the proton resonance method to measure the components of the earth's magnetic pole. Uch.zap.LGU no.303:3-15 '62. (MIRA 15:11)
(Magnetism, Terrestrial)

L 26058-66 EWT(1)/T JK
ACC NR: AP5025125 (N) SOURCE CODE: UR/0079/65/035/010/1752/1759

AUTHOR: Lomakina, V. I.; Voronkova, V. V.; Mandel'baum, Ya. A.; Mel'nikov, N. N.

ORG: All-Union Scientific Research Institute of Chemical Agents for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)

TITLE: From the organic insectofungicide field; LXXIV. The reaction of trialkylphosphites with thiolmonochloroacetates

SOURCE: Zhurnal obshchey khimii, v. 35, no. 10, 1965, 1752-1759

TOPIC TAGS: insecticide, fungicide, organic phosphorus compound, chromatography, chemical precipitation, ester, organic synthetic process, chlorinated organic compound, IR spectrum

ABSTRACT: By the reaction of trialkylphosphites with esters of thiolmonochloroacetic acid a number of compounds were synthesized which possess strong insecticide activity. In analogizing the reaction of trialkylphosphites with esters of monochloroacetic acid, it was suggested that the compounds obtained have a structure which corresponds to the classical schematic of the Arbuzov reaction. In addition to knowing that the structure of products of the trialkylphosphite reaction with thiolmonochloroacetic acid esters is very interesting in studying the mechanism of the insecticide reaction of organic phosphorous compounds, it was interesting to

Card 1/2 UDC: 542.955.2:547.5

L 26058-66

ACC NR: AP5025125

study this reaction in detail and to determine all the products which are derived. In studying the triethylphosphite reaction with ethylthiolmonochloroacetate, Ø,Ø-diethyl-Ø-(1-ethylthio)vinylphosphate and diethoxyphosphonthiolacetate were precipitated. In order to separate the products of the trialkyphospite reaction with the thiolmonochloroacetates the laminated column chromatography method was used. All the substances precipitated from the reaction products were identified not only by analysis and constant determination but also by infrared spectra. The authors thank A. F. Vasil'yev for taking spectra of all compounds. Orig. art. has: 2 fig. and 3 tables.

SUB CODE: 06, 07/SUBM DATE: 18May64/ ORIG REF: 010/ OTH REF: 006

Card 2/2

L 23147-66 EWT(m)/T/EWP(t) IJP(c) JD
ACC NR: AP6006847 SOURCE CODE: UR/0181/66/008/002/0564/0565

AUTHOR: Yukhnevich, A. V.; Tkachev, V. D.; Lomako, V. M.

ORG: Belorussian State University im. V. I. Lenin, Minsk (Belorusskiy gosudarstvennyy universitet)

TITLE: Extrinsic radiative recombination in single crystals of silicon

SOURCE: Fizika tverdogo tela, v. 8, no. 2, 1966, 564-565

TOPIC TAGS: radiative recombination, silicon, single crystal, crystal theory, impurity band

ABSTRACT: The authors attempt to explain the mechanism responsible for impurity recombination by studying the recombination radiation which is produced when nonequilibrium carriers are captured by deep levels in the forbidden band which are the result of residual chemical impurities and other imperfections in the crystal lattice. Excitation was produced by electrical injection through a diffused *pn* junction. The radiation was recorded by a system including a monochromator, lead sulfide receiver and narrow band amplifier. In addition to the natural emission band, the specimens showed an emission band in the impurity region with a maximum at 1.47 μ. The position of this maximum is independent of the conductivity type, resisti-

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L 23147-66
ACC NR: AP6006847

2

vity and previous history of the specimen. The intensities of the natural and impurity bands differ noticeably from specimen to specimen for various current densities and temperatures. No correlation was found between the dislocation concentration in the single crystals and the nature of the impurity radiation. The nature of the emitters responsible for this impurity radiation may be determined by studying recombination radiation in crystals specially doped with various chemical impurities. The authors are grateful to Z. M. Afanas'yev and M. Y. Bortnik for assistance with the experiment. Orig. art. has: 1 figure.

SUB CODE: 20/ SUBM DATE: 25Jul65/ ORIG REF: 001/ OTH REF: 001

Card 2/2 UVR

L 24056-66 EWT(d)/EWP(1) IJP(c) BB/GG

ACC NR: AP6013237 SOURCE CODE: UR/0413/66/000/008/0031/0031

34
B

INVENTOR: Misulovin, L. Ya.; Karsums, A. M.; Koblents, Ya. G.; Lomas, T. A.; Artsishevskiy, V. V.

ORG: none

TITLE: Matrix ferrite diode-storage device. 16C Class 21, No. 180630 [announced by the State Electrical Equipment Plant of the Latvian Sovnarkhoz (Zavod VEF Latviyskogo SHKh); Scientific Research Institute of Urban and Rural Telephone Communications (Nauchno-issledovatel'skiy institut gorodskoy i sel'skoy telefonnoy svyazi)]

SOURCE: Izobreteniya, promyshlennyye obraztsy tovarnyye znaki, no. 8, 1966, 31

TOPIC TAGS: storage device, ferrite core memory, ferrite

ABSTRACT: An Author Certificate has been issued for a matrix ferrite diode-storage device which, using a relay control, has the number of columns which corresponds to the information, while the number of rows is determined by the code. In order to use the recording wires for all the cores of one row and to combine them with the output wires of the row, the input of each recording wire is connected through the controlling contact to the battery minus pole, while its output is connected to the actuating device using the controlled relay. In order to combine the recording windings with the output windings, one winding, which in series with the decoupling diode is connected with the recording wire at one end and with the reading wire at

Card 1/2 UDC: 621.374.32

L 24056-66
ACC NR: AP6013237

the other, is wound around each ferrite core. This winding serves all the cores of one row and is connected through the selecting contact with the battery pole on one side and through the controlling contact with the reading current source on the other. [DW]

SUB CODE: 09/ SUBM DATE: 16Jun63/

Card 2/2 dda

L 04645-67 EWT(m)/EWT(l) WW

ACC NR: AP6024004 SOURCE CODE: UR/0201/66/000/002/0042/0049

AUTHOR: Lomashev, B. I.; Vasil'yev, N. I. 79 B

ORG: Institute of Nuclear Power, AN BSSR (Institut yadernoy energetiki AN BSSR)

TITLE: Influence of dissociation on the surface friction in a turbulent boundary layer

SOURCE: AN BSSR. Vestsi. Seryya fizika-tekhnichnykh navuk, no. 2, 1966, 42-49

TOPIC TAGS: nitrogen oxide, dissociated gas, turbulent boundary layer, fluid friction, specific heat, Reynolds number, stagnation point

ABSTRACT: The authors consider a two-component mixture of N_2O_4 and NO_2 at a temperature 350 - 450K at a velocity corresponding to $M \leq 1$. It is assumed that the gas mixture is obtained as the result of the dissociation of certain molecules and that the N_2O_4 and NO_2 are in chemical equilibrium. The authors formulate and solve the fundamental boundary-layer equations with allowance for the specific heats of the component gases, determined from statistical-mechanics calculations. A connection is established between the concentration and the velocity in the boundary layer and between the temperature and the velocity. Plots showing the distribution of the concentration and the temperature in the turbulent layer and the dependence of the density on the velocity and of the surface-friction coefficient on the Reynolds number for $M = 0.5$ and $M = 1$ are given. The effect of stagnation of the boundary layer is considered. Orig. art. has: 4 figures and 22 formulas.

SUB CODE: 20, 07/ SUBM DATE: 29Sep65/ ORIG REF: 003/ OTH REF: 004

kh

Card 1/1

LOMASHOV, I. P.

LOMASHOV, I. P. --"Structure of the Stalinogorsk Ground, its Coal Content, and the Contour of the Limestone Foundation in the Central Portion of the Southern Wing of Moscow Basin near Moscow." *(Dissertations for Degrees in Science and Engineering Defended at USSR Higher Educational Institutions) Moscow Order of Lenin and Order of Labor Red Banner State U imeni M. V. Lomonosov, Geology Faculty, Moscow, 1955

SO: Knizhnaya Letopis', No. 25, 18 Jun 55

* For Degree of Candidate in Geological and Mineralogical Sciences

15-1957-1-76

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 1, p 10 (USSR)

AUTHOR: Lomashov, I. P.

TITLE: Structural Relation of the Stalinogorsk Horizon to the Relief of the Limestone Foundation on the Southern Wing of the Moscow [Coal] Basin (O zavisimosti stroyeniya stalinogorskogo gorizonta ot rel'yefa izvestnyakovogo fundamenta v yuzhnom kryle Podmoskovnogo basseyna)

PERIODICAL: Vestn. Mosk. un-ta, 1956, Nr 3, pp 125-130

ABSTRACT: The article presents general data pertaining to the geologic structures in the central part of southern wing of the Moscow [Coal] Basin, which include (listing from the bottom): 1) Likhvinskiy pod"yarus (substage) subdivided into Malevskiy (on the average

Card 1/4

15-1957-1-76

Structural Relation of the Stalinogorsk Horizon to the Relief of the Limestone Foundation of the Southern Wing of Moskva Basin.

10m) and Upa (on the average 25m) forizonty (horizons). The former is represented by the interlayered blue green clays and limestones, and the latter by the limestones with scattered clay lenses; 2) Chernyshenskiy (sub) stage which rests unconformably on the Likhvinskiy and which is found only in the southern part of the basin along the Cherepet' and Serena Rivers. This sub-stage consists of the Limestone of Cherepet' horizon (up to 20m), underlain by the sandy-clay Ageyevskaya stratusphere (up to 20m); 3) Yasnoya Pol substage, which also lies on an unconformity, and which is represented by the Stalinogorsk and Tula horizons; the Stalingorsk horizon is extremely complex in its structure, being composed of two complexes of the sandy-clay formations with seams of coal, the upper of the two complexes being economically significant; the Tula horizon lies unconformably on the

Card 2/4

Structural Relation of the Stalinogorsk Horizon to the Relief of the Limeston Foundation on the Southern Wing of Moskva Basin.

Stalingorsk horizon (Yum), and consists in its lower part of sands overlain by clays interlayered with limestone and which carries coal lenses approaching economical extent. 4) the Oka substage consists of three horizons: Aleksin, Mikhaylov and Venev, comprising stata of intensely eroded limestone (up to 60m). The pre-coal bearing relief of the district has been subdivided to the depths of 60m and contains easily traced eroded river valleys. The thickness of the Stalingorsk horizon is very intimately related to the pre-coal bearing relief; on the summits it reaches about 10m, and in the erosional valleys it increases to 40 to 70 m due to the thickening of sand lying at the base of horizon. The elevated portions of the terrain and the sloping sides of the ancient river valleys were most favorable to the formation of coal (coal layers of over 3m), while in the

Card 3/4

Structural Relation of the Stalinogorsk Horizon to the Relief of the Limestone Foundation on the Southern Wing (Con't)

depressions the average thickness of these layers reaches to 1 to 2 m and in the river valleys the coal strata are either insignificant in thickness or are completely absent.

I.M.K.

Card 4/4

AUTHOR: Lomashov, I.P. 11-58-3-8/14

TITLE: The Relief of Limestone Foundation in the Podmoskoviye Basin (O rel'yefe izvestnyakogo fundamenta v Podmoskovnom Basseyne)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1958, # 3, pp 97-107 (USSR)

ABSTRACT: For many years the author studied the results of well-boring during coal prospecting in the central part of the southern Podmoskoviye area. The territory covered by these studies belongs administratively to the Tula and Moskva Oblast's, and covers an area of approximately 5,000 sq km. The author divided this territory into 4 basic sections:
1) The southern elevation - in the southern part of the territory;
2) The Lomintsev (Lomintsevskiy) depression - to the north of the southern elevation in a north-western direction;
3) The Tula-Kaluga (Tulsko-Kaluzhskoye) elevation - to the north of the Lomintsev depression;
4) The Mikhaylov depression situated north of the Tula-Kaluga elevation. Besides these 4 basic sections, intersected by long winding valleys formed by erosion of ancient rivers, there are several separate, closed, oval-shaped dips. The results obtained by boring operations showed that the formation of a limestone

Card 1/3

base began during the positive movements in the Post-Upa Stage of the Lower Carboniferous Period, when the layers of the limestone base underwent minor folding processes. During that epoch, the 4 above mentioned basic sections were also formed. As the elevation continued during the long continental interruption, erosive action of the rivers began; hence the formation of numerous valleys. Thus was formed the Pre-Carboniferous relief of the base. Further changes in this relief were manifold and very complex. The relief was subjected to a series of positive and negative movements, and during the interruptions, further changes took place making it still more complex. Comparing the map of the Pre-Carboniferous relief (Fig. 4) with the map of the contemporary relief of the limestone base (Fig. 1), it could be said that the 4 basic sections, formed during the Pre-Carboniferous Period and complicated by the erosive processes, continued to develop during the whole geologic history, whereby their initial dimensions were preserved. It can also be said, that the basic movements, which changed their relief, occured after the deposition of

The Relief of Limestone Foundation in the Podmoskoviye Basin 11-58-3-8/14

limestone of the Oka Stage.
There is a map, 8 figures, and 0 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy ugol'nyy institut (VUGI), Moskva (All-Union Scientific Research Coal Institute (VUGI), Moscow)

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PHASE I BOOK EXPLOITATION SOV/4676

Lomashov, I.P.

Germaniy i kremniy - vazhneyshiye poluprovodnikovyye materialy (Germanium and Silicon as the Most Important Semiconductor Materials) Moscow, Metallurgizdat, 1960. 51 p. 3,650 copies printed.

Reviewer: B.A. Krasyuk, Professor, Doctor of Technical Sciences; Ed.: N.S. Vagina; Ed. of Publishing House: M.S. Arkhangel'skaya; Tech. Ed.: V.V. Mikhaylova.

PURPOSE: This booklet is intended for geologists, chemists, radio engineers, and metallurgists having a secondary technical education, and for persons concerned with methods of obtaining essential semiconductor materials.

COVERAGE: The booklet presents in a popular form basic information on germanium and silicon, including facts about their chemical and certain physical properties, their distribution in nature and methods of their production. It also contains brief information on the electric properties of semiconductors and their use in diodes, transistors, photocells, thermoelements and thermistors. No personalities are mentioned. There are 11 references, all Soviet.

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Some characteristics of germanium distribution in coal-bearing deposits. Dokl. AN SSSR 137 no.3:692-694 Mr '61. (MIRA 14:2)

1. Institut geologii i razrabotki goryuchikh iskopayemykh AN SSSR. Predstavleno akademikom D.I.Shcherbakovym.
(Germanium) (Coal geology)

LOMASHOV, I.P.

Forms of germanium migration during lithogenesis. Dokl. AN SSSR 140 no.5:1174-1176 O '61. (MIRA 15:2)

1. Institut geologii i razrabotki goryuchikh iskopayemykh AN SSSR. Predstavleno akademikom D.I.Shcherbakovym.
(Germanium)
(Coal geology)

LOMASHOV, I.P.

Relationship between the accumulation of coal and the relief of limestone basement in the Moscow Basin. Biul.MOIP.Otd.geol. 37 no.2:150-152 Mr-Ap '62. (MIRA 15:7)
(Moscow Basin--Coal geology)

LOMASHOV, Ivan Pavlovich, kand. geol.-miner. nauk; LOSEV, Boris Ivanovich, prof., doktor tekhn. nauk; VLASOV, L.G., red.; SIMKINA, G.S., tekhn. red.

[Germanium in coals]Germanii v iskopaemykh ugliakh. Moskva, Izd-vo Akad. nauk SSSR, 1962. 257 p. (MIRA 15:11)
(Germanium)

LOMASHOV, I. P.

Forms of migration of rare and dispersed elements in the coal formation process. Dokl. AN SSSR 147 no.4:924-926 D '62.
(MIRA 16:1)

1. Institut geologii i razrabotki goryuchikh iskopayemykh. Predstavleno akademikom D. I. Shcherbakovym.

(Coal geology) (Trace elements)

GABISIANI, A.G.; MUSHKUDIANI, Z.A.; TOMASHVILI, A.N.; TABAGARI, I.D.Sh.

Deoxidation of open-hearth steel with ferrosilicoaluminum.
Soob. AN Gruz. SSR 33 no.1:167-174 Ja '64. (MIRA 17:7)

1. Gruzinskiy metallurgicheskiy institut, Tbilisi. Predstavleno akademikom F.N. Tavadze.

LOMASOVA, T.A.

Improving motion-picture theaters for the population. Gor.khoz.Mosk. 37 no.10:24-29 O '63. (MIRA 17:2)

1. Nachal'nik Upravleniya kinofikatsii Ispolnitel'nogo komiteta Moskovskogo gorodskogo Soveta deputatov trudyashchikhsya.

STEPUN, O.A., [deceased], LOMAURI, A.I., AKHMETELI, G.S., CHIKVAIDZE, V.N., (Tbilisi)

Further data on biochemical properties of renin in the normal kidney and of renol, the pressor substance of rabbits kidney ischemized in vivo and of kidney autolyzed in vitro. Arkh.pat. 18 no.2:52-57 (MIRA 11:10)

1. Iz otdela patokhimii (zav. - prof. O.A. Stepun) Instituta klinicheskoy i eksperimental'noy kardiologii A.N. GruzSSR (dir. - deystvitel'nyy chlen AN GruzSSR, prof. M.D. TSinamzdvarishvili).

(PROTEASES,
renin, differentiation from renol, pressor substance from kidney ischemia in vivo & kidney after autolysis in vitro (Rus))
(KIDNEYS,
isolation of pressor substance renol in ischemia in vivo & after autolysis in vitro (Rus))
(BLOOD PRESSURE, effect of drugs on,
pressor substance renol isolated from kidneys in ischemia in vivo & after autolysis in vitro (Rus))

AMIRANASHVILI, Sh.Ya.; LOMAURI, N.Yu.: KHOSHTARIYA, T.S.; NATMELADZE, M.V.; KHARAIDZE, G.V.; TSERETELI, G.V., red.; SONGULASHVILI, M.I., red.izd-va; DZHAPARIDZE, N.A., tekhn. red.

[The Georgian S.S.R.; a brief account] Gruzinskaia SSR; kratkie svedeniia. Tbilisi, 1963. 108 p. (MIRA 17:2)

1. Akademiya nauk Gruzinskoy SSR.

LOMAYEV, G.Z.

Effect of the rigidity of universal testing machines on the rate of deformation of metal specimens. Zav. lab. 31 no.9:1130-1133 '65.
(MIRA 18:10)

1. Krasnodarskiy politekhnicheskiy institut.

DZHGAMADZE, O. S.; KIZIRIYA, B. I.; LOMAYA, O. V.; MAKHARADZE, D. G.; TSINTSADZE, D. G.; EYDINOVA, G. Z.

Some data on the development of clouds over mountain ranges. Trudy Inst. geofiz. AN Gruz. SSR 20:237-244 '62. (MIRA 16:1)

(Clouds)

ACC NR: AP6028028 SOURCE CODE: UR/0251/66/042/001/0057/0064

AUTHOR: Lomaya, O. V.

ORG: Academy of Sciences of Georgian SSR. Institute of Geophysics (Akademiya Nauk Gruzinskoy SSR. Institut geofiziki)

TITLE: Determining the altitude of the boundary layer of the atmosphere and of the turbulence coefficient in a mountainous area

SOURCE: AN GruzSSR. Soobshcheniya, v. 42, no. 1, 1966, 57-64

TOPIC TAGS: atmospheric turbulence, geostrophic wind, boundary layer problem, atmospheric geopotential

ABSTRACT: The altitude of the boundary layer of the atmosphere, H_n, in Tiflis has been calculated for 345 consecutive days during 1960—1961, by modifying the equation given by D. L. Laykhtman (Fizika pogranichnogo sloya atmosfery. Gidrometeoizdat, L., 1961) to its form:

$$H = \sqrt{\frac{0{,}24 V_g^2 \bar{T}(1-\bar{\delta})}{\gamma_a - \bar{\gamma}}},$$

where V_g - velocity of the geostrophic wind,

$$\bar{T} = \frac{T_0 + T_n}{2}, \quad \bar{\gamma} = \frac{T_0 - T_n}{H}$$

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and $\bar{\delta}$ - average values of absolute temperature, of temperature gradient, and of the dissipation of the turbulence energy into heat, respectively, for the whole boundary layer. Insertion of the determined values of H_n into the equation

$$K = 0{,}19\,\omega_2 H_n^3,$$

where $\omega_2 = \omega \sin \varphi$, ω - angular velocity for the rotation of earth, φ - latitude, leads to the determination of the turbulence coefficient $\bar{K}$. Comparing the calculated H_n and $\bar{K}$ values with the values for the same parameters obtained empirically shows a satisfactory agreement. The methods presented and illustrated are suitable for research as well as for operational scale level of study. The paper was presented by corresponding member of the Academy M. M. Mirianashvili on 25 June 1965. Orig. art. has: 3 tables, 3 figures, and 3 equations.

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